

MEMORANDUM OF CONVERSATION

Number 24 of 13 copies, Series A.

June 20, 1958

SUBJECT: Questions relating to Arctic Inspection.

PARTICIPANTS: Mr. F. M. Tovell, First Secretary
British Embassy

Mr. Vincent Baker, S/AE

COPIES TO: RM/R USRO, Paris
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Mr. Tovell called to leave for consideration the attached paper on technical points to be considered in our studies of an Arctic inspection system. He referred to the paper as an elaboration of the questions given by Mr. Rae to Mr. Farley on May 22 (also attached) and said it represented in broad outline the questions under consideration within the Canadian government in anticipation of possible talks with the United States on the subject.

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The Canadian authorities have been giving some thought to some of the general problems connected with a system of safeguards in the northern regions. The more important considerations would seem to be:

- (a) Scale of effort on the ground: numbers and locations of observation posts, scale of manning, radar and communications requirements, and degree of mobility desirable.
- (b) Scale of air effort required: numbers and types of aircraft, equipment to be carried (radar and infrared), and frequency of flights.
- (c) Administrative effort required: international staff to produce and administer inspection regulations and restrictions, procedures for preparing flight regulations and flight plans, administration of communications orders, and collection, analysis and dissemination of inspection reports.
- (d) Restrictions on inspection teams: liaison officers, speed and flight limitations on aircraft, clearance of flight plans, restrictions on use of airfields and on equipment in aircraft.
- (e) Effect of weather, incidence of cloud and low illumination in winter on efficiency of aerial inspection and difficulty of continuous photographic reconnaissance in Arctic (mean cloudiness and percentage of overcast, fog and blowing snow)
- (f) Necessity for providing adequate communications in auroral area where radio paths are especially subject to disruption by magnetic storms.

Studies made so far suggest as a preliminary conclusion that the best safeguard against surprise attack from the point of view both of discouraging preparations and of providing an additional margin of warning would be presence of international observers on the airfields and at missile launching sites of the states involved. To be of real value such observers would require the support of a rapid and completely reliable communications system efficiently designed, supplied and operated. In addition

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to ground posts at airfields and launching sites either airborne or land-based radar tracking systems appear necessary to monitor notified flights and to report any unauthorized movement. This requirement implies a system for reporting and clearance of aircraft flight plans affecting zone of surveillance. A further requirement would be regular aerial photographic reconnaissance of zone to ensure no undeclared military establishments were being prepared or operated and to detect any unjustified buildup of the elements necessary for a major assault. Evidently such a system would require a central administrative and operational authority involving a substantial international staff.

These preliminary conclusions imply a considerable apparatus would be needed outside the actual zone of surveillance in order to provide an effective system even though the system were to apply only to aircraft, missiles, etc. moving into, within or across the zone. To the extent that the system would be restricted in its operations outside the zone of surveillance it would appear correspondingly to be diminished in effectiveness. If, for example, there were to be no ground observers at airfields and launching sites outside the zone or if their communications were inferior the value of system would appear to be sharply reduced. If there were no procedures for filing flight plans for flights into, within or across the zone, it would be difficult to envisage a basis for a monitoring system.

The Canadian authorities would be grateful to learn whether the United States authorities concerned have conducted "cost and effectiveness" surveys for systems involving varying degrees of ground support outside the zone of surveillance. It is the impression in Ottawa that at best a limited plan based on the polar regions would provide only partial safeguards. Indeed the ground control element outside the zone of surveillance may become increasingly important with the passage of time as long-range missiles become operational.

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On the basis of the studies of appropriate United States authorities as to how control in the Arctic might be implemented, and because of Canada's deep interest in this matter, the Embassy has been asked to enquire from the Department of State how their studies on this aspect of disarmament now stand. The sort of question to which broad answers would be appreciated would be the following:

- (a) What sort of practical activities within the Arctic does the United States contemplate by way of inspection on the ground and in the air?
- (b) What kind of base facilities, if any, does the United States visualize for international teams in Canada but outside the Arctic area?
- (c) What kind of additional installations in the Canadian north does the United States consider may be required by way of electronic devices or communications?
- (d) Does the United States envisage notifications to an international inspection system of flight plans of intended flights to or within the Arctic and if so by what means?

THE CANADIAN EMBASSY,
Washington, D. C.

May 22, 1958.

State-FD, Wash., DC

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